

REMARKS

Claims 22, 25, 27, 29 and 31 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,576,783 to Koutz (hereinafter “Koutz”). Claim 26 was rejected under 35 U.S.C. §103(a) as being unpatentable over Koutz in view of U.S. Patent No. 4,413,348 to Kapich (hereinafter “Kapich”). Claim 28 was rejected under 35 U.S.C. §103(a) as being unpatentable over Koutz in view of U.S. Patent No. 4,714,593 to Naito (hereinafter “Naito”). Claim 30 was rejected under 35 U.S.C. §103(a) as being unpatentable over Koutz as applied to claim 22 in view of U.S. Patent No. 3,507,747 to Strohmeyer, Jr. (hereinafter “Strohmeyer”).

Claim 22 is hereby amended to more clearly and particularly define the invention.

Reconsideration of the application based on the following remarks is respectfully requested.

Interview Summary

Applicant’s representative Danielle Sullivan (Reg. 64, 125) contacted Examiner Mondt to request an interview. Applicants’ representatives William Gehris (Reg. No. 38,156) and Danielle Sullivan (Reg. 64,125) and Examiner Mondt conducted a telephonic interview on September 30, 2009, and Applicant’s representatives thank Examiner Mondt for his careful analysis and comments. The Koutz reference was discussed. Examiner Mondt recommended amending claims to further define the structural limitations that may distinguish it from Koutz. No final agreement was reached.

§102 Rejections

Claims 22, 25, 27, 29 and 31 were rejected under 35 U.S.C. §102(b) as being anticipated by Koutz.

Koutz discloses a heat pump augmentation of nuclear process heat. The system “employs a secondary loop having a heat pump operative to increase the temperature of the working fluid after initial heating by the reactor, and wherein the heat pump is located in a nonradioactive environment outside the reactor containment vessel so as to substantially

reduce overall system costs.” (Col. 1, line 68 to col. 2, line 6). A “steam turbine 46 drives a generator 48 having operative association with an electric motor 50 coupled to the shaft of turbine 34, so as to cooperate therewith in driving the compressor 26.” (Col. 3, lines 27 to 30).

Claim 22 is hereby amended to recite “device for producing electricity from heat produced in a core of a nuclear reactor comprising:

a primary circuit including helium and circulating the helium to cool the core of the nuclear reactor;

an electric generator;

a drive shaft driving the electric generator;

a gas turbine driving the drive shaft;

the drive shaft being common to the electric generator and the gas turbine;

a secondary circuit including a mixture of helium and nitrogen, the secondary circuit circulating the mixture of helium and nitrogen, the gas turbine driven by the mixture of helium and nitrogen in the secondary circuit;

a heat exchanger connected to the primary circuit and secondary circuit and exchanging heat from the helium of the primary circuit to the mixture of helium and nitrogen in the secondary circuit; and

a tertiary circuit including water and steam, the tertiary circuit circulating the water and the steam, the tertiary circuit including a steam generator and a steam turbine, the steam generator receiving the water at an inlet and providing the steam at an outlet, the steam driving the steam turbine, the steam generator connected to the secondary circuit downstream of the gas turbine, and being heated by the mixture of helium and nitrogen in the secondary circuit.”

Koutz fails to teach or show “the drive shaft being common to the electric generator and the gas turbine,” as recited in claim 22. The gas turbine and electric generator of Koutz do not have a common drive shaft as claimed.

Withdrawal of the rejection of independent claim 22 and dependent claims 25, 27, 29 and 31 is respectfully requested.

§103 Rejections

Claim 26 was rejected under 35 U.S.C. §103(a) as being unpatentable over Koutz in view of Kapich.

Claim 26 is indirectly dependent on claim 22. In view of the discussion above regarding claim 22, withdrawal of the rejection is respectfully requested. Furthermore, there is no reason or motivation for one of skill in the art to modify Koutz in view of Kapich.

Claim 28 was rejected under 35 U.S.C. §103(a) as being unpatentable over Koutz in view of Naito. Claim 28 is dependent on claim 22. In view of the discussion above regarding claim 22, withdrawal of the rejection is respectfully requested. Furthermore, there is no reason or motivation for one of skill in the art to modify Koutz in view of Naito.

Claim 30 was rejected under 35 U.S.C. §103(a) as being unpatentable over Koutz as applied to claim 22 in view of Strohmeyer. Claim 30 is dependent on claim 22. In view of the discussion above regarding claim 22, withdrawal of the rejection is respectfully requested. Furthermore, there is no reason or motivation for one of skill in the art to modify Koutz in view of Strohmeyer.

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CONCLUSION

It is respectfully submitted that the application is in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,
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